

AMENDMENTS TO THE SPECIFICATION

Please replace Paragraph [0027] with the following paragraph rewritten in amendment format:

[0027] An exemplary thermal model using a single state variable, bulk friction device temperature (T_C), is provided according to the following equations:

$$\begin{aligned} T_{Cderiv} &= \left(\frac{1}{M_{clutch}} \right) (H_R - K_{diss} (T_C - T_{sump})) \\ T_{Cderiv} &= \left(\frac{1}{M_{friction\ device}} \right) (H_R - K_{diss} (T_C - T_{sump})) \\ \hline T_C &= T_C + (\Delta t \cdot T_{Cderiv}) \end{aligned}$$

where:

H_R = heat rate (input)

T_{sump} = sump temperature (input)

Δt = loop time of the thermal model

$M_{friction\ device}$ = approximate thermal inertia of the friction device system ($J/^\circ C$)

K_{diss} = heat rejection of friction device and cooling system ($W/^\circ C$)

The thermal model functions as a low-pass filter that tracks the value $\frac{H_R}{K_{diss}} + T_{sump}$ with a

time constant equal to $\left[\frac{M_{clutch}}{K_{diss}} \right] \frac{M_{friction\ device}}{K_{diss}}$. Any similar low-pass filter function can be

implemented to effectively perform as a thermal model.